

# Air Emissions Inventory Program

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Air Monitoring, Inventory and Modeling

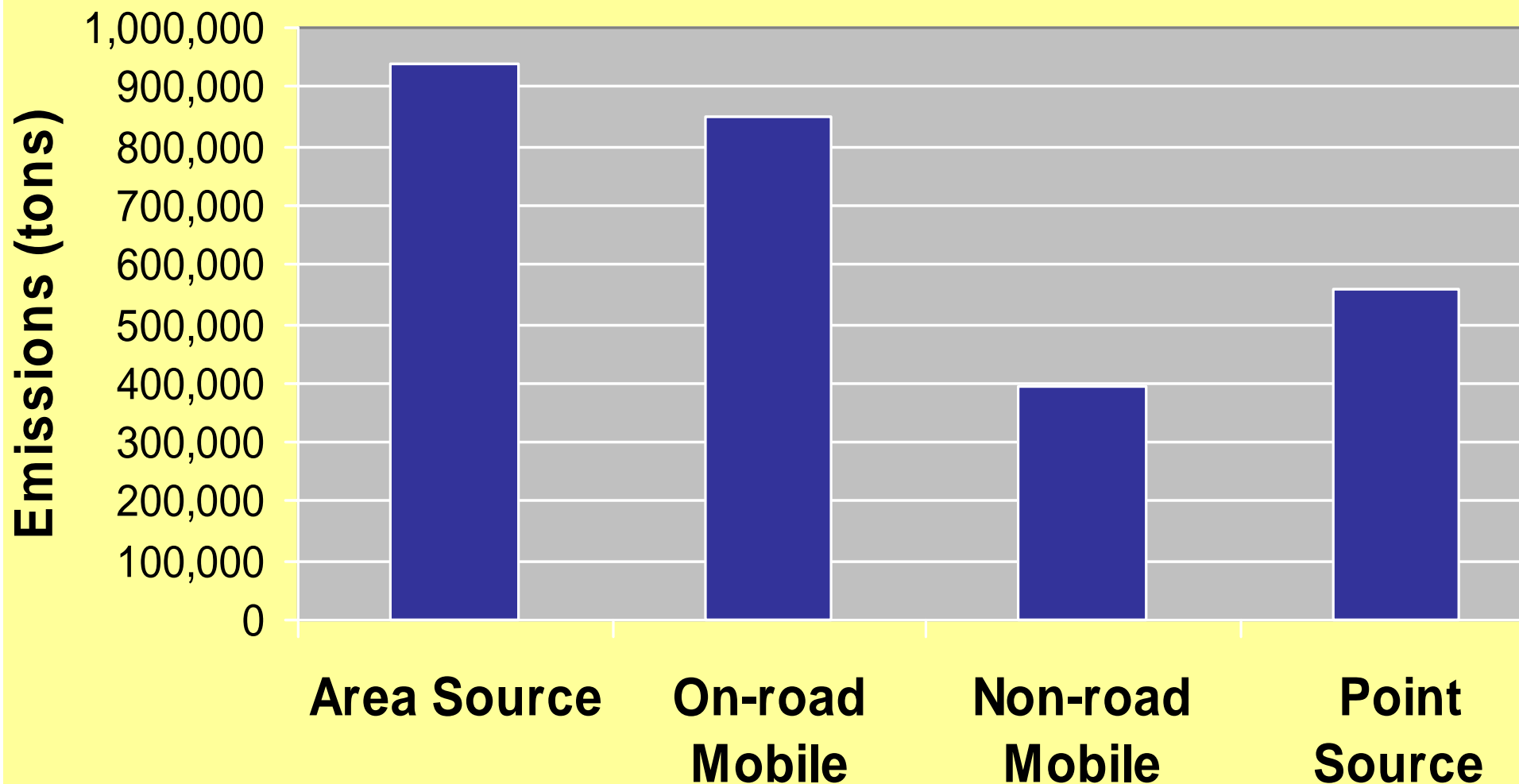
# Emissions Inventory Program

- What is it?
- Why is the inventory important?
- Inventory overview for 2003
- QA issues
- Regulations – changes taking effect
- Electronic emission inventory update
- Website and FAQ's

# Emissions Source Categories

- **Point** Large, stationary, identifiable sources of pollutant emissions into the atmosphere.
- **Mobile On-road or Off-road** sources, such as automobiles, trucks, aircraft, trains, construction and farm equipment, lawn and garden
- **Area** Small commercial sources with emissions below the permit cutoffs such as dry cleaners, and auto body painting. Residential sources such as house painting and solvent use.

# 2002 Kansas Emissions Source Totals for All Pollutants



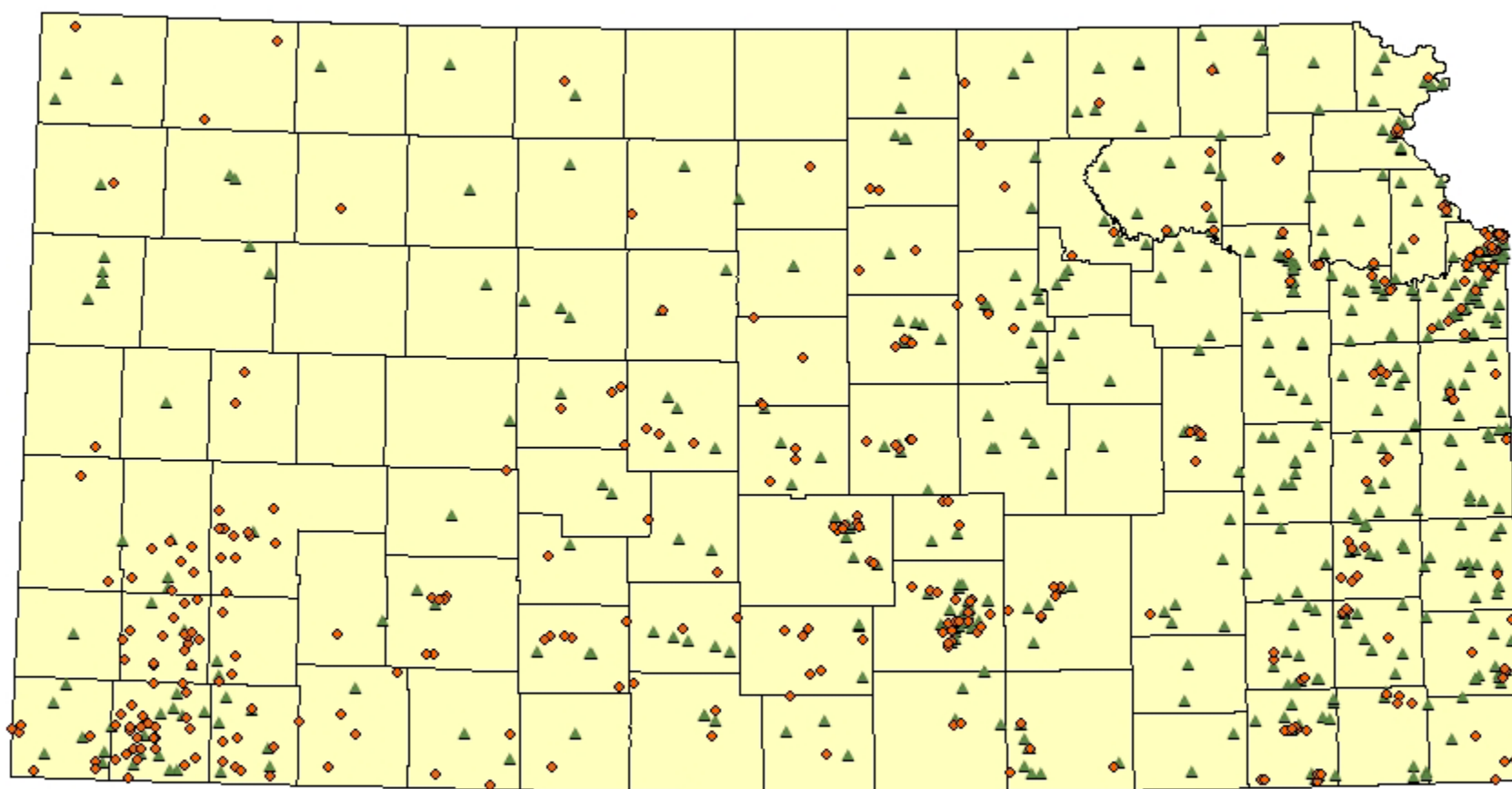
# Inventory's Many Uses

- Used for calculating fees
- Required emissions submittals to EPA
  - CERR
- PSD NAAQS or increment analysis
- Policy and Planning
  - Rules and regulations (CAIR, Regional Haze, etc.)
  - SIP development for O<sub>3</sub>, PM<sub>2.5</sub> and Regional Haze
  - Cancer risk assessment

# Overview

- Annual Emissions Inventory for 2003
  - 340 Class I sources (26 fewer)
  - 630 Class II sources (1 fewer)
- Pollutants collected
  - CO, PT, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>, VOC, NH<sub>3</sub>, 188 HAPs
- Collected \$4,204,000 in fees in 2003

# Class I and II Facilities in Kansas



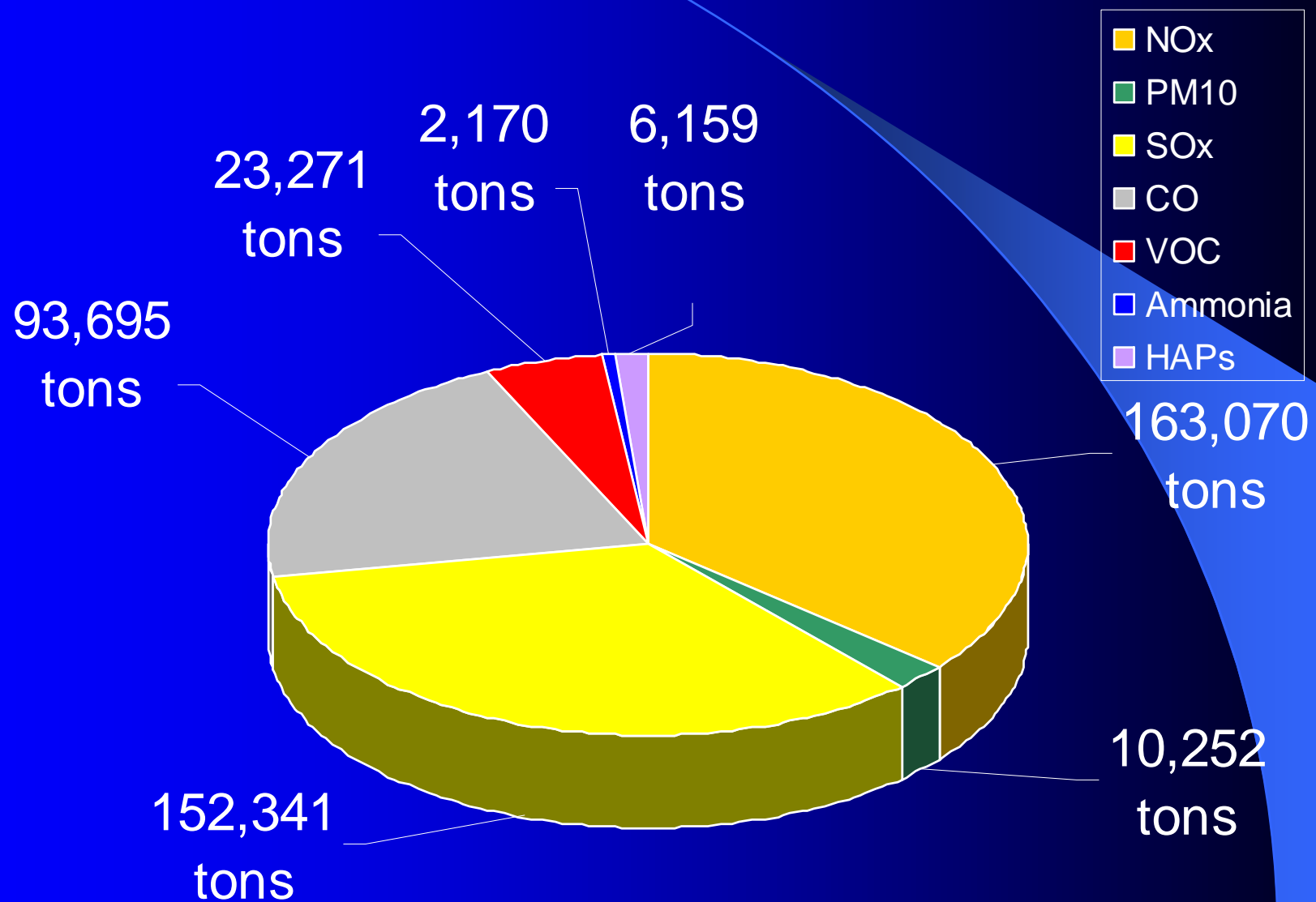
## Legend

- ◆ Class I Facilities
- ▲ Class II Facilities



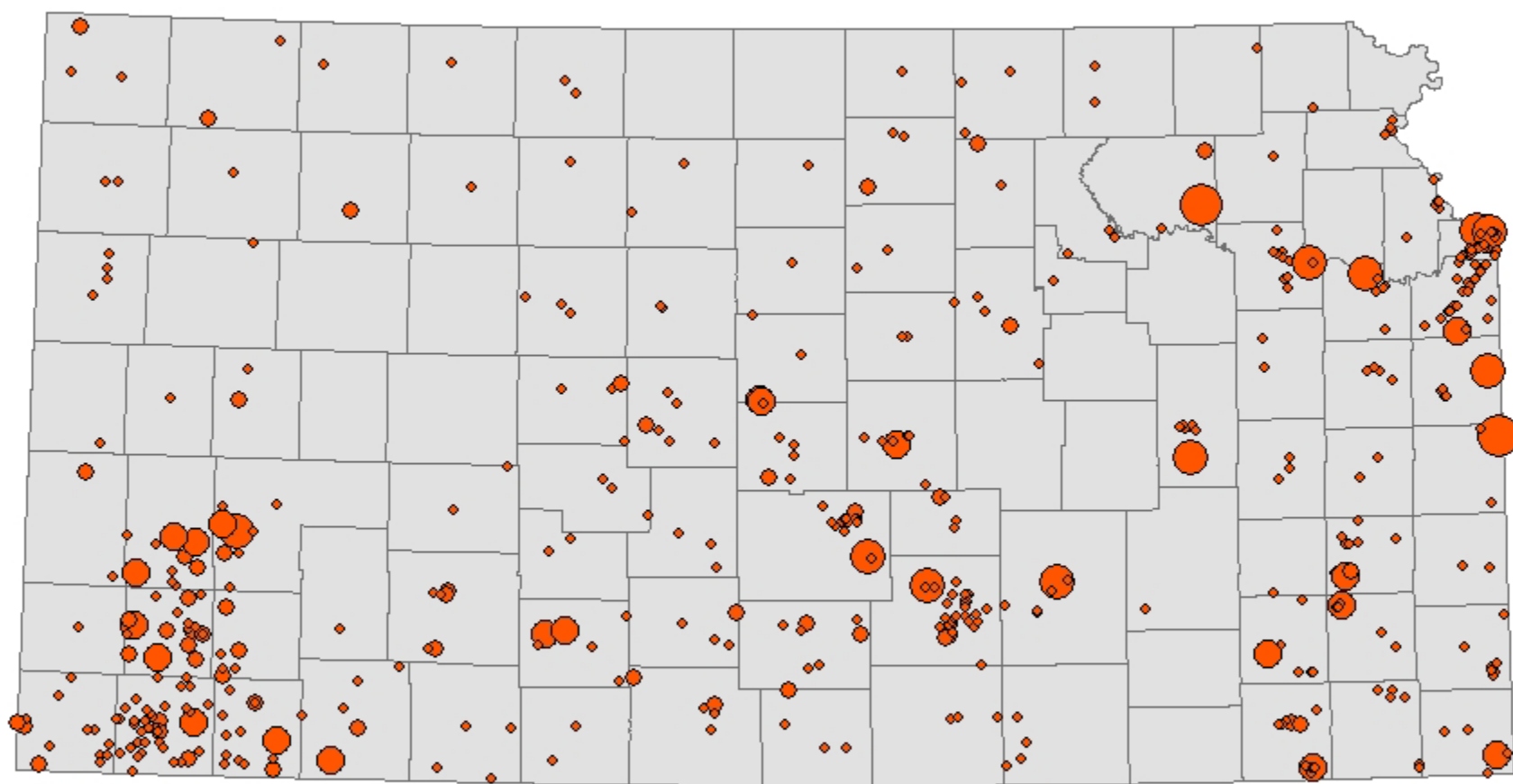
0 25 50 100 Miles

# Point Source Emissions 2003

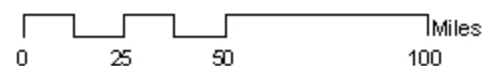




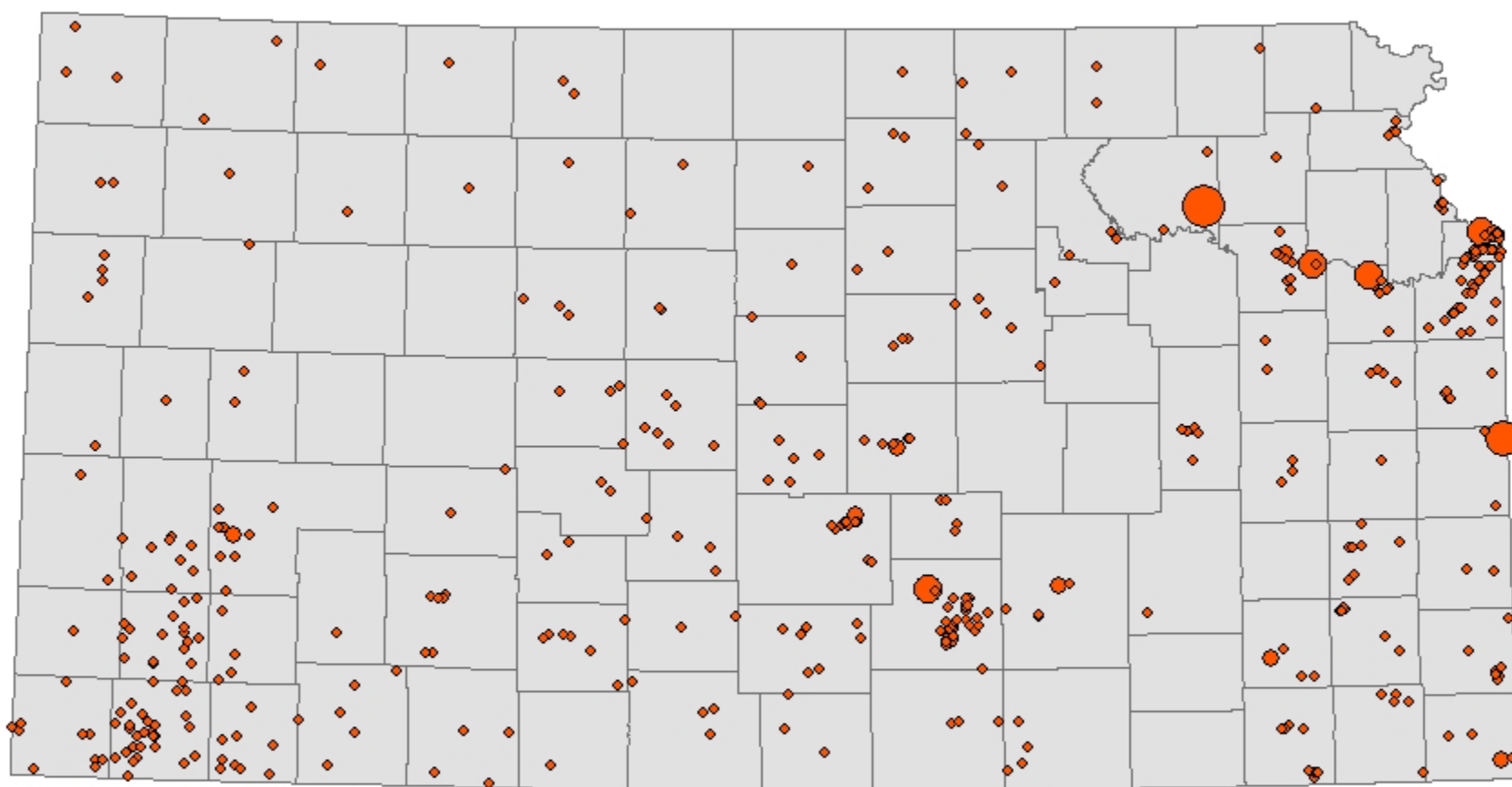
# NOx Emission Sources (tons/yr)



Facility NO2 (tons/yr)



# SOx Emission Sources (tons/yr)



SO<sub>2</sub> (tons/yr)



0 - 947



948 - 4059



4060 - 8728



8729 - 31874

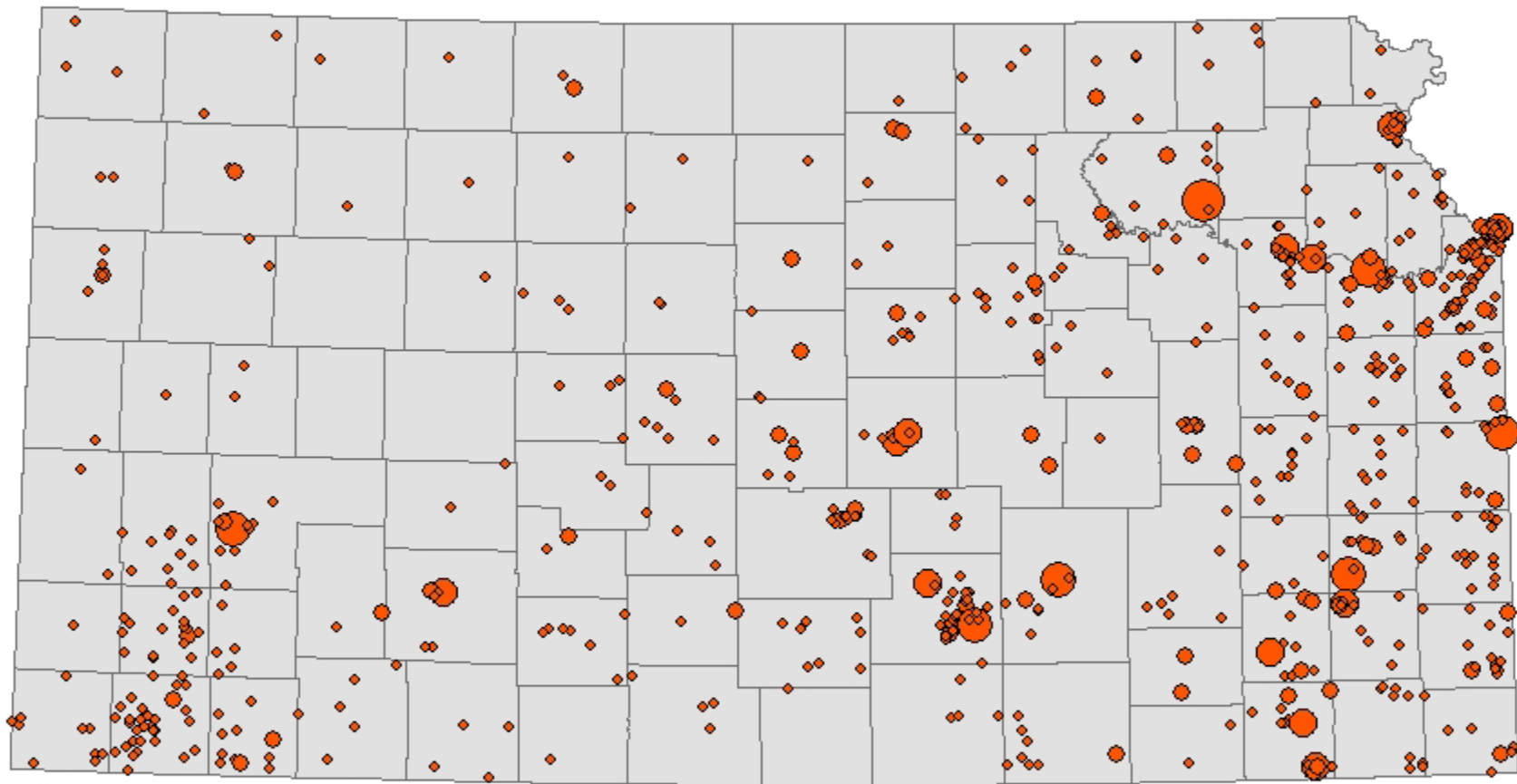


31875 - 67611



0 25 50 100 Miles

# PM10 Emission Sources (tons/yr)



PM10 (tons/yr)

• 0 - 20



21 - 104



105 - 257



258 - 509

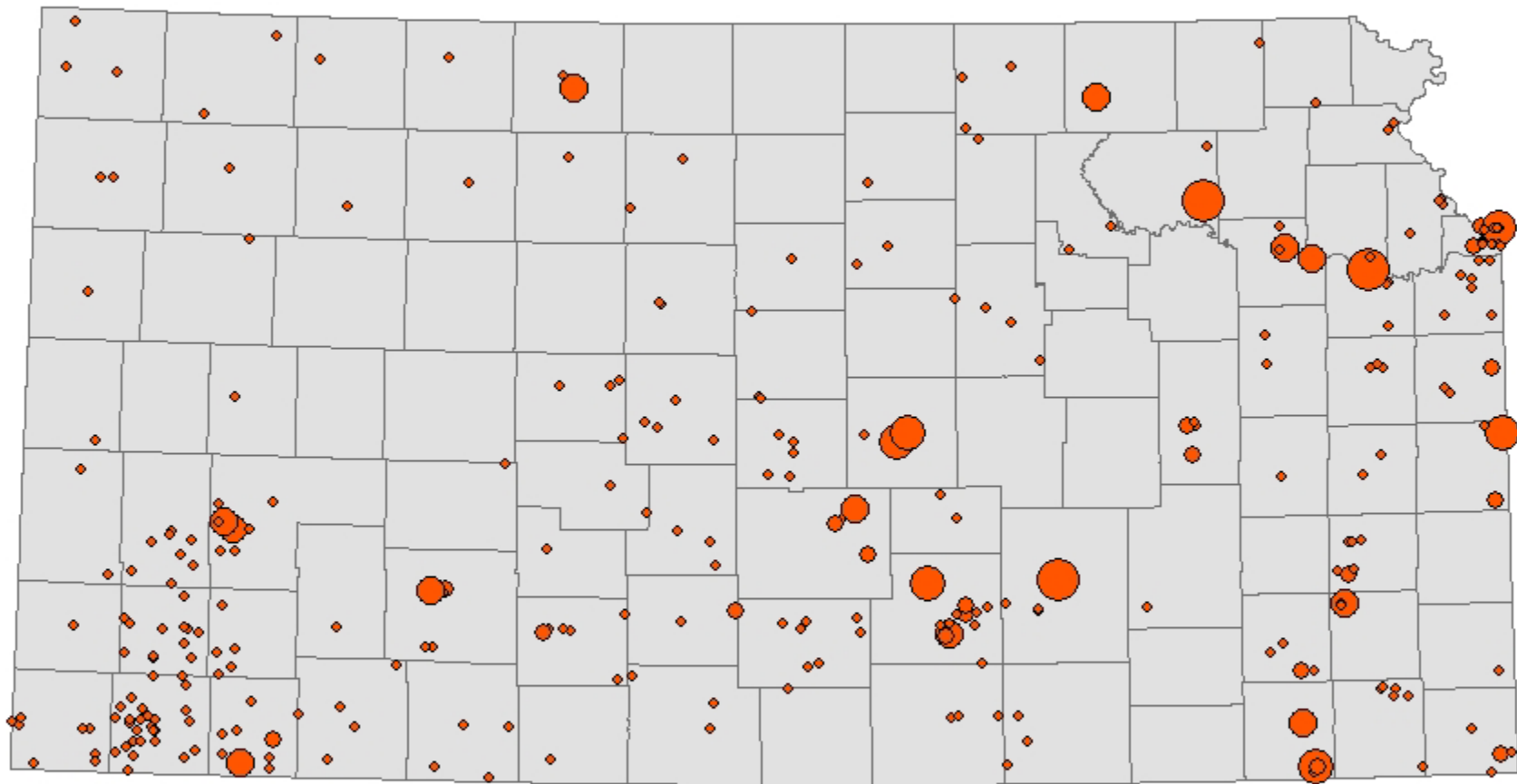


510 - 1324



0 25 50 100 Miles

# PM2.5 Emission Sources (tons/yr)



PM2\_5 (tons/yr)

• 0 - 13



14 - 42



43 - 100



101 - 235

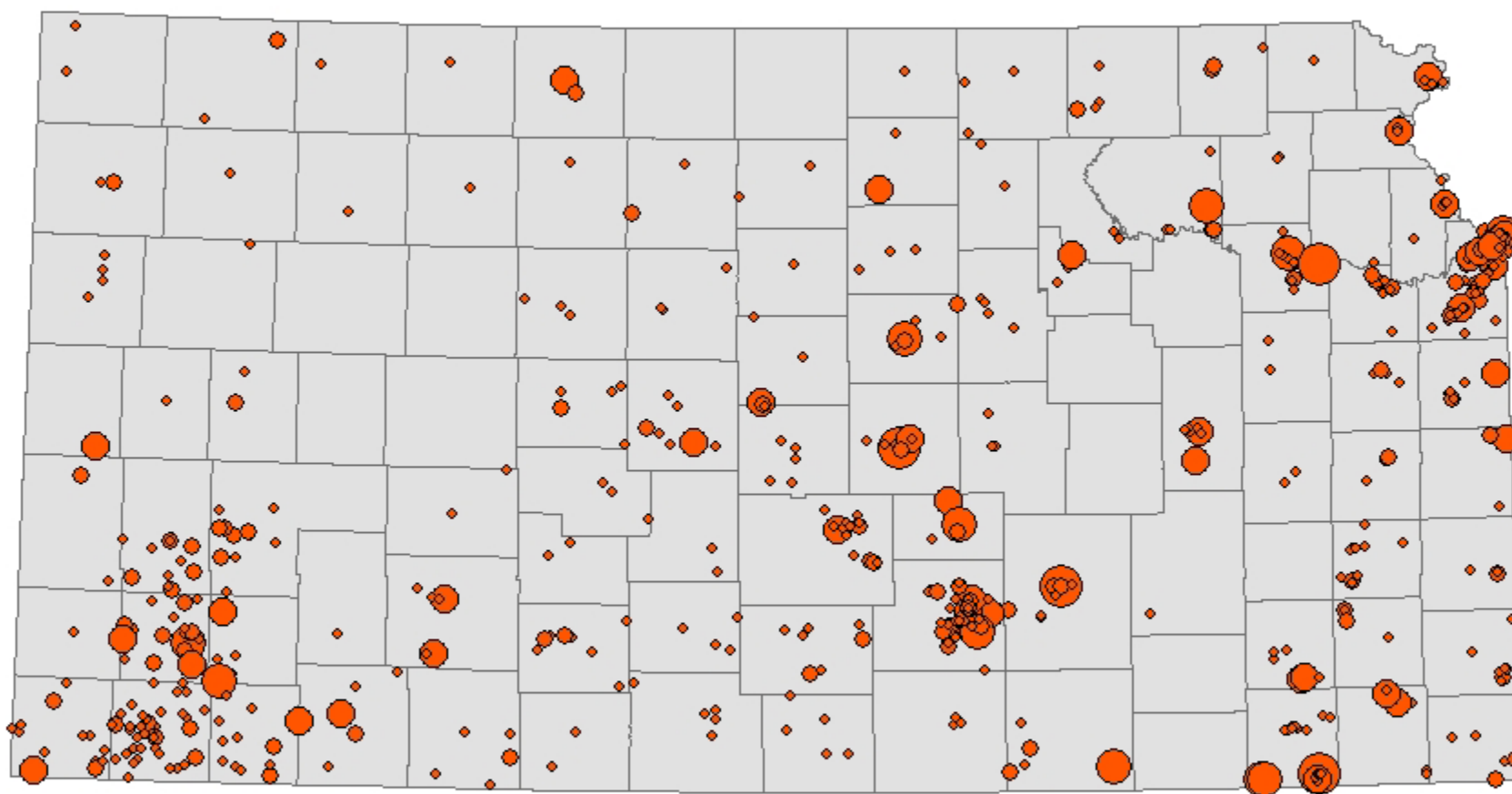


236 - 580



0 25 50 100 Miles

# VOC Emission Sources (tons/yr)



VOC (tons/yr)

• 0 - 29



30 - 94



95 - 251



252 - 668

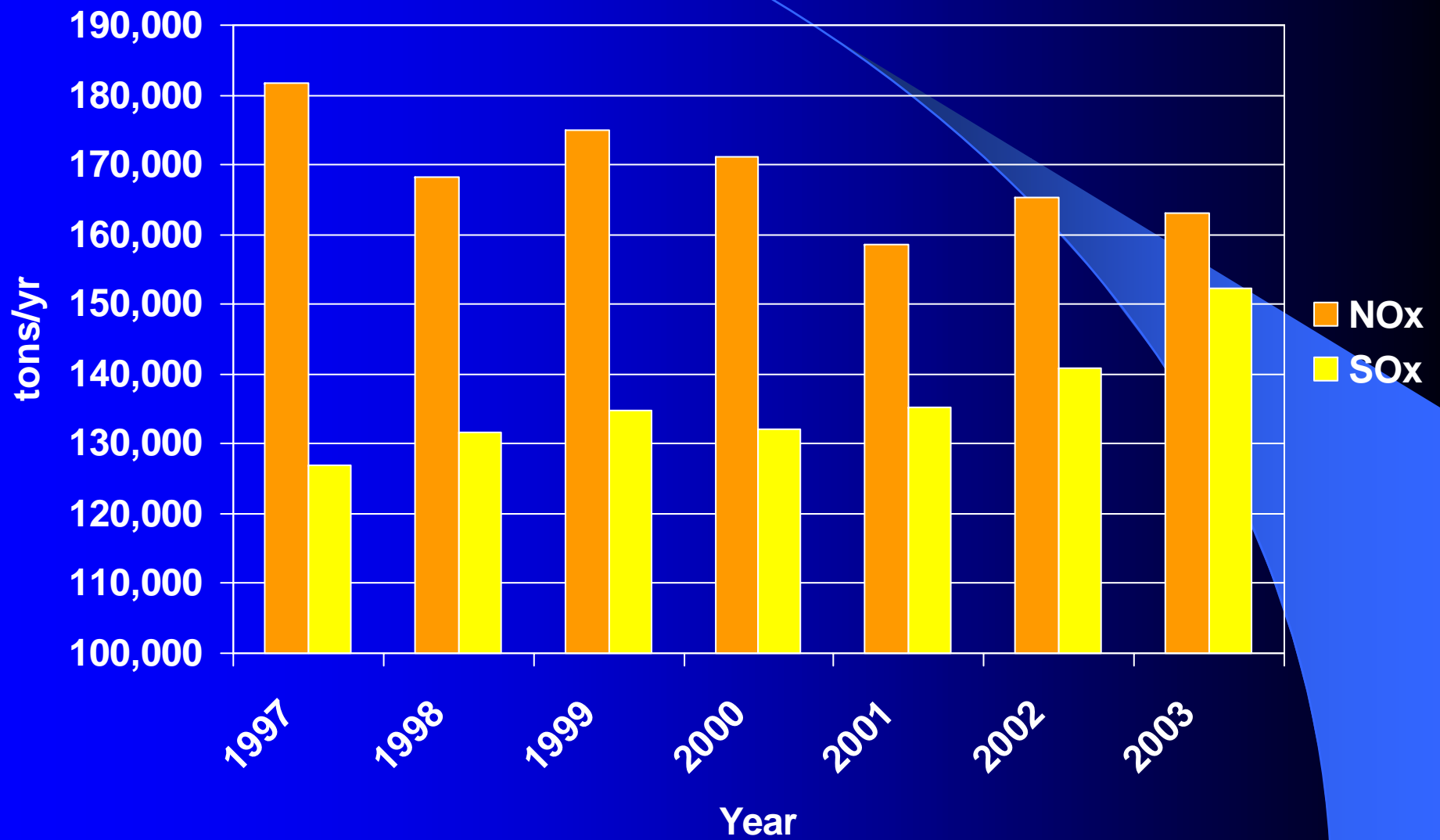


669 - 1952

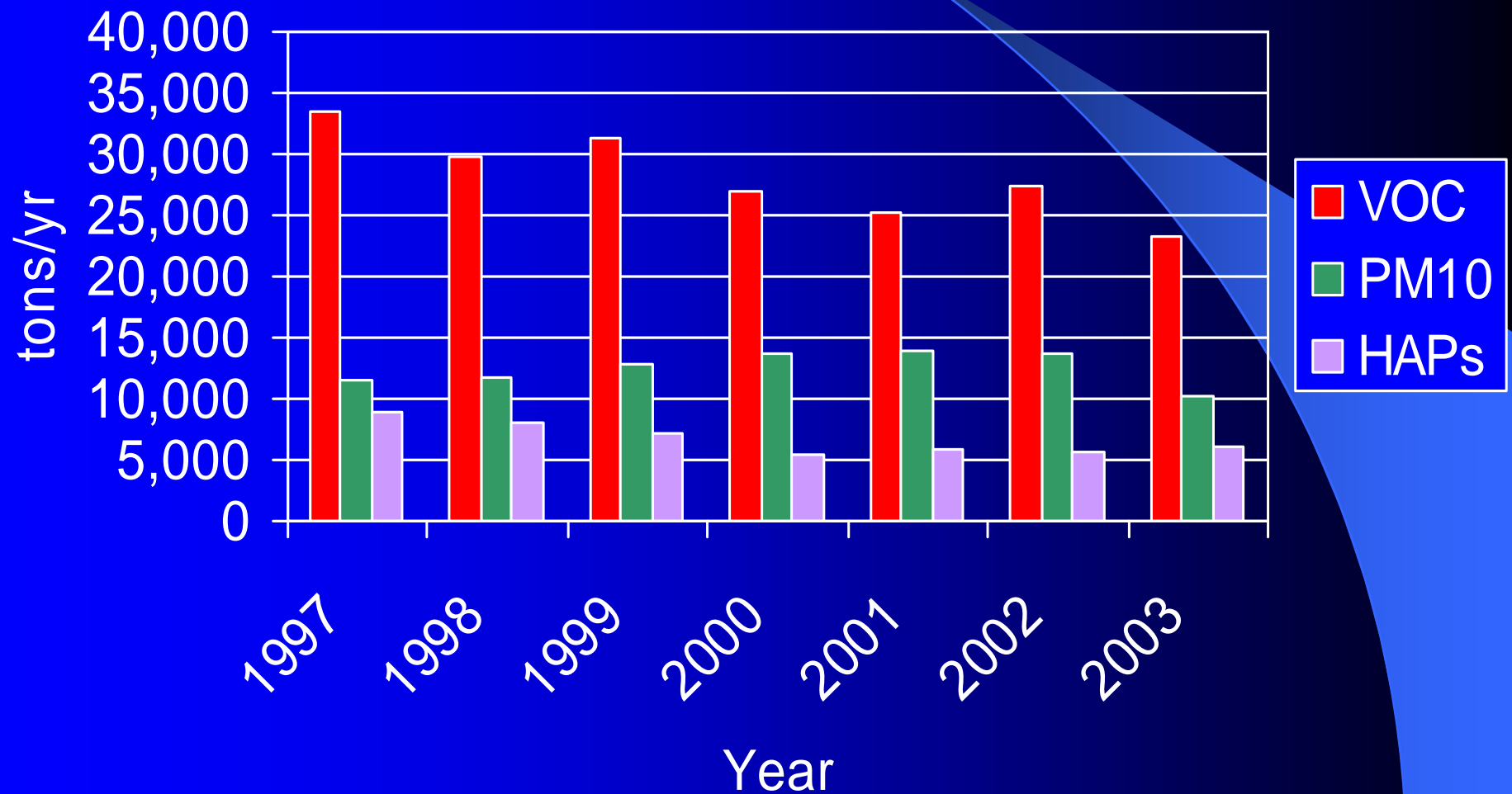


0 25 50 100 Miles

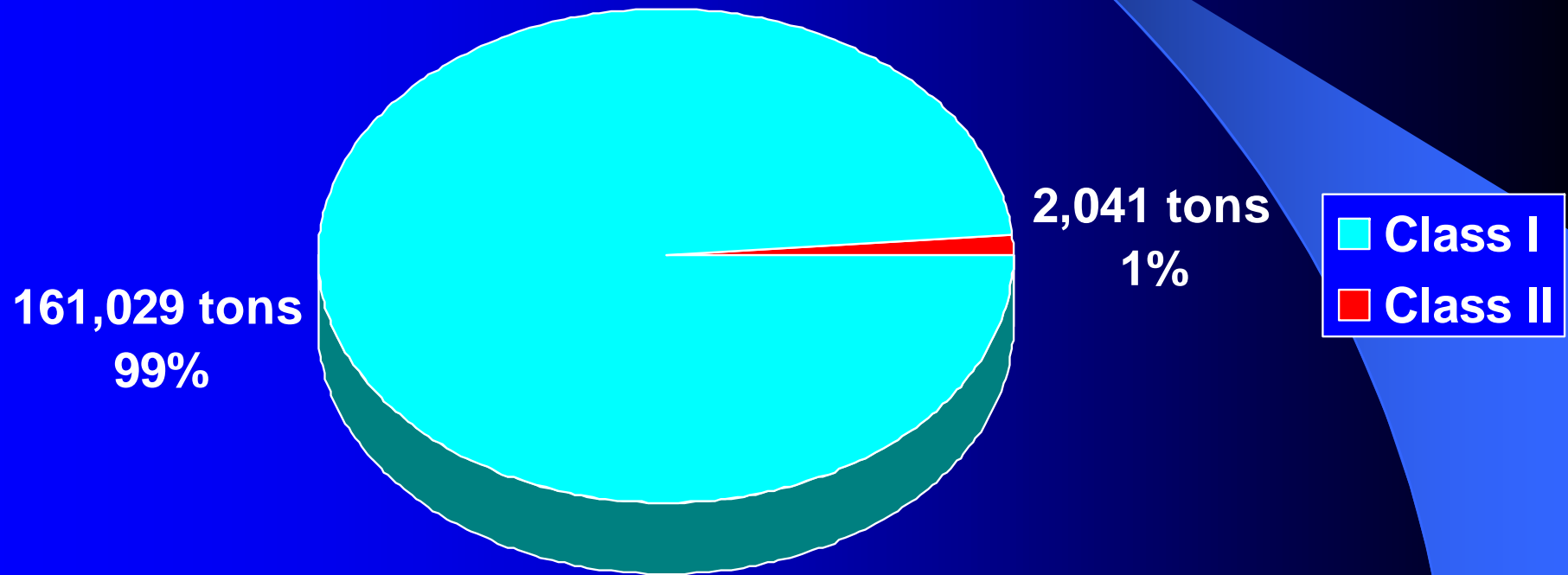
# Emissions Trends



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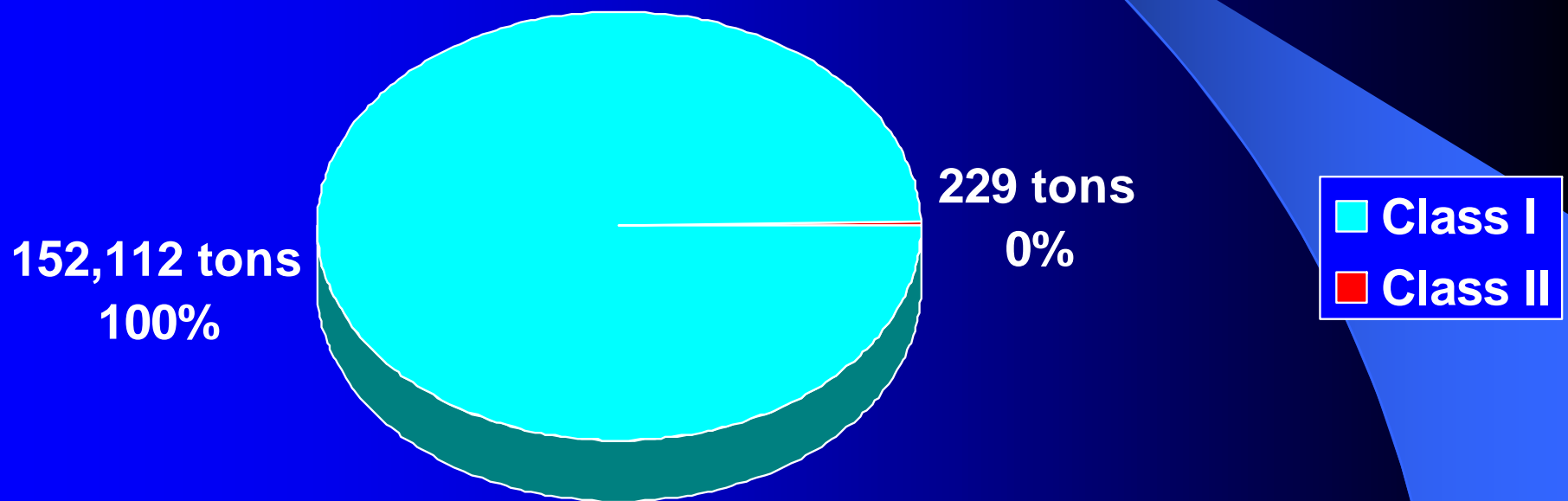


# Point Source NO<sub>x</sub> Comparison

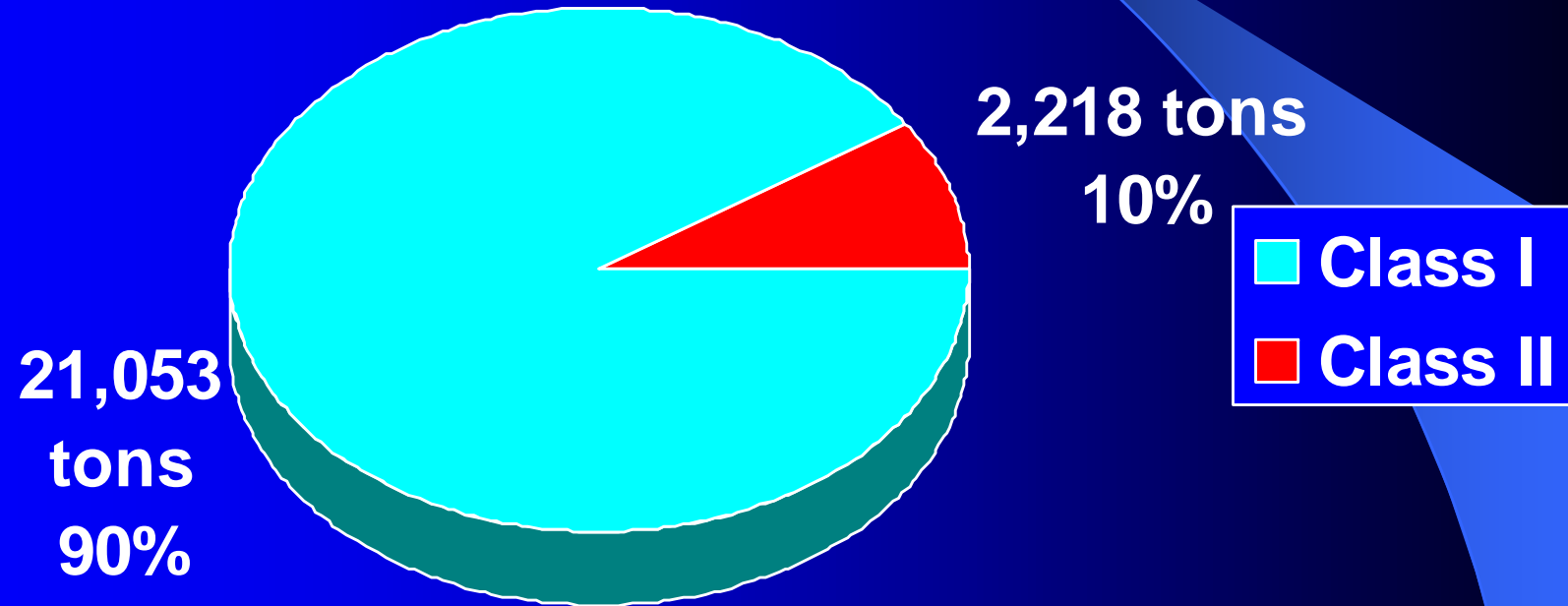




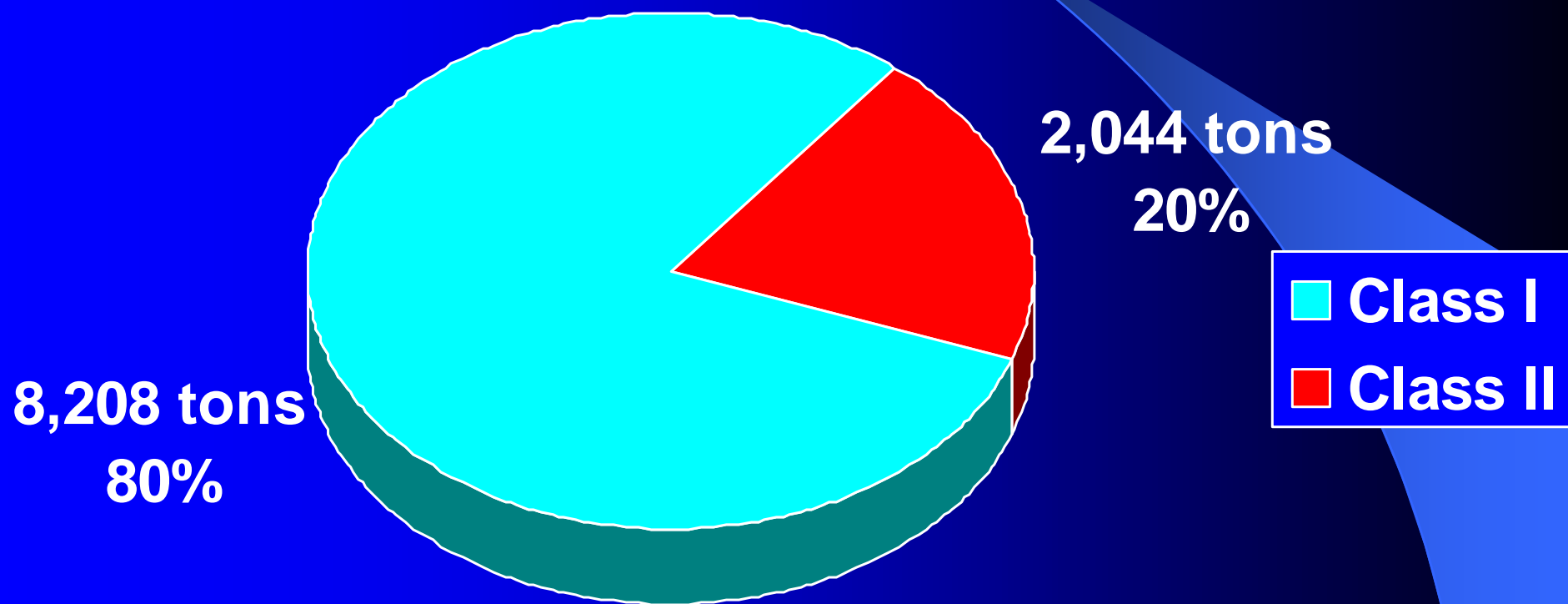
# Point Source SO<sub>x</sub> Comparison



# Point Source VOC Comparison



# Point Source PM<sub>10</sub> Comparison



# Take-Home Message...

- Class I (Title V) sources represent the vast majority of point emissions in the state (98% for criteria pollutants)
- Almost twice as many Class II sources as Class I sources
- Disproportionate amount of time spent on smaller sources

# QA Issues

- Random detailed QA reviews of inventories
- If we do a QA review, expect:
  - A call asking for additional information
  - A letter summarizing the results
  - A summary of issues to correct next time

# QA Issues cont.

- Common mistakes include:
  - Incorrect emissions factors
  - Incorrect SCC's
  - Incorrect SCC and process rate units
  - Math mistakes
  - $PM_{2.5} > PM_{10} > PM$
  - Control device calculation errors

# Inventory-Related Regulations

- 28-19-201 – Regulated compounds
- 28-19-202 – Fees
- 28-19-210 – Calculation of actual emissions
- 28-19-517 – Class I annual inventory
- 28-19-546 – Class II annual inventory

# Regulation Changes

- Fees remain at \$25 per ton
- Due dates:
  - Class I's due June 1
    - Unless a Sat., Sun. or Holiday, then next business day
    - Postmark indicates timeliness
  - **Class II's due April 1**
- Hearing on regulation changes scheduled for July 6, 2005
  - Should be in effect for the 2005 inventory



# Electronic Inventory Submittal

- Voluntary
- Original timeline
  - July 1, 2003 – contract started
  - February 1 – June 1, 2004 accept electronic submissions
- New timeline
  - ???

# Other Issues

- Inventory survey
  - Please give us your feedback
- Keep up the good work!!!

# Website & FAQ's

- [www.kdhe.state.ks.us/bar/emission/](http://www.kdhe.state.ks.us/bar/emission/)
  - Forms
  - Emissions factors
  - FAQ's
  - Contact information

# The Staff

- Tom Gross – Section Chief
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  - Class II inventories and Natural Gas Industry
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Questions???